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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
VERBITSKY, GAIL KAPLAN	
ART UNIT	**PAPER NUMBER**
2859	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/802,050	CHI, YU-CHIAO	
	Examiner	Art Unit	
	Gail Verbitsky	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-2 are finally objected to because of the following informalities:

Claim 1: "said surface temperature data" in line 14 lacks antecedent basis. Perhaps applicant should insert –skin—before "surface" in order to clearly describe the invention.

Claim 2: Perhaps applicant should replace "temperature sensor" in line 1 with –sensor means—for proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 5, 9-11, 13-15 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei (U.S. 6292685).

Pompei discloses a device to measure a skin surface temperature. The device comprises an infrared sensor probe (thermopile) for detection temperature of skin (at a second body site) and producing a temperature signal data. The device also comprises a sensor means (thermistor) 98 inside the infrared sensor probe (thermopile) to measure a reference (cold junction/ ambient) temperature of the thermopile and producing a reference operating temperature signal data. In addition, the device comprises a calculating unit and a memory associated with the calculating unit. A reference data (correction factor/ weighting factor) derived from clinical tests and,

inherently, stored in memory. Pompei teaches to calculate/ estimate a core (rectal or oral) temperature based on the skin temperature data and the ambient temperature and using weighting coefficients from the memory. Pompei states that the skin temperature varies with perfusion (physiological parameter), and that the reference data (weighting coefficient) empirically determined from prior clinical experiments/ statistics (col. 7, lines 47-49).

For claim 5: as shown in formula (6), the core temperature is linear function (linear interpolation) of the skin temperature.

For claim 9: The fact that Pompei uses the coefficients to calculate the temperature suggests, that Pompei teaches to store/ obtain a weighting coefficient (from memory/ look up table) corresponding to the measured skin temperature (second body site, thus, being a first group) and ambient temperature which produces a reference operating temperature signal data, and based on this step, estimate/ calculate the core temperature.

In addition, Pompei teaches a calibration mode/ sequence. A switch 104 is responsible for a calibration mode (switching between modes).

With respect to "whereby"/"thereby", as stated in claim 1: it has been held that the functional "whereby" statement does not define any structure and accordingly cannot serve to distinguish. In re Mason, 114 USPQ 127, 44 CCPA 937 (1957).

4. Claims 3-4, 6, 12, 16-19 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei in view of Schuh (U.S. 5857777).

Pompei discloses a device as stated above in paragraph 3.

Pompei does not explicitly teach a non-volatile memory.

Schuh discloses a device in the field of applicant's endeavor wherein all reference data (calibration coefficients) are being stored in an EEPROM (non-volatile memory). Schuh teaches to store in memory (LUT) cold junction compensation coefficients (data relating to ambient temperature, thus, being a second group). Also, Schuh teaches to store in memory (LUT) data relating to measured (at a first body site) temperature, as shown in Fig. 5 (third group). The data stored in memory is, inherently, related to the data obtained in clinical tests.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Pompei, so as to have an EEPROM, as taught by Schuh to keep all the data, so as to make it easier for the operator to use the memory and program the memory, and also to obtain quick results using a high speed EEPROM, as very well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Pompei, so as to keep the data relating to all components of the measurements, i.e., first body site temperature, second body site temperature and ambient temperature, in the memory, so as to allow the operator to obtain accurate data for all components, in order to achieve more accurate results of measurements.

5. Claim 7 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei in view of Listl (U.S. 6314994).

Pompei discloses a device as stated above in paragraph 3.

Although Pompei teaches a calibration mode, Pompei does not explicitly teach to switch between the calibrating and operating modes, as stated in claim 7.

Listl teaches to have two modes, calibrating and measuring (operating) and switch between them.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Pompei, so as to switch between the calibration and operation (measurement) modes, as taught by Listl, so as to allow the operator to calibrate the device prior to use, as very well known in the art.

6. Claim 8 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei in view of Kraus et al. (U.S. 6789936).

Pompei discloses the device as stated above in paragraph 3.

Pompei does not explicitly teach the limitations of claim 8.

Kraus discloses a device, which accommodates to measuring temperature at different sites and states that when switched form one site measurement to another, a switch actuates different temperature calculation methods using different formulas and using different parameters (entire col. 2). This would imply, that the formulas and parameters are stored in memory (LUT).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Pompei, so as when switched between different measurement modes, the device uses different formulas and parameters, to calculate the temperature, as taught by Kraus, so as to achieve more accurate results by considering that the temperature is different at different body sites.

Response to Arguments

7. Applicant's arguments filed on May 09, 2005 have been fully considered but they are not persuasive.

Applicant states that Pompei uses weighting coefficients to determine an internal body temperature, and that that calculation uses approximation that is time consuming. This argument is not persuasive because, the applicant, as well as Pompei, uses correction coefficients to determine temperature in the first site (oral/ rectal) which is associated with a core temperature. Also, even is the Pompei's method "may be time consuming", it does not contradicts to a claimed invention, since nothing in the claims indicates that the claimed methods are faster than other methods, including Pompei's method, i.e., no particular time of calculating has been claimed. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

Applicant states that the present invention uses reference data stored in the memory, the reference data derived from the clinical tests. In the rejection on the merits of this limitation, the Examiner uses Schuh who teaches to use the reference data taken from the clinical tests.

Applicant states that weighting coefficients of Pompei have the meaning different from the instant invention. This argument is not persuasive because Applicant does not claim the particular coefficients having particular features that make them different from Pompei. It is the claims that define the claimed invention, and it is claims, not

specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

Applicant states that reference data is not a physical value such as a perfusion rate p. This argument is not persuasive because the particular physical value has not been claimed. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

Applicant states that Schuh look up table (LUT) is not used to determine temperature depending on a measured voltage. This argument is not persuasive because, A) the statement that the temperature values must depend on a measured voltage is not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

B) Also, in the rejection on the merits of the limitations related to reference table/ memory, Examiner uses Pompei.

Applicant states that Pompei does not use a look up table, and that Pompei's coefficients are calculated not in a way characterized by the look up table of claim 6. This argument is not persuasive because, Pompei teaches to measure skin temperature (second site) and store the coefficients related to the skin temperature in memory (LUT), so as to determine body's core (first site) temperature. Pompei teaches to use coefficients related to a skin temperature (first group) derived from clinical tests. Schuh teaches to use coefficients related to ambient temperature (second group) and data

relating to measured (at a first body site) temperature, as shown in Fig. 5 (third group). The data stored in memory is, inherently, related to the data obtained in clinical tests. Therefore, the combination of Pompei and Schuh teaches all the limitation of claim 6.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Tokita et al. U.S. 20020191675 teaches an estimation (calculating) circuit to estimate/ calculates a temperature inside a live body (core: rectal or oral) by measuring a temperature of a forehead.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571/ 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GKV

Gail Verbitsky
Primary Patent Examiner, TC 2800

July 01, 2005